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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

PATEL, NIKETA I

ART UNIT PAPER NUMBER

2182

DATE MAILED: 05/14/2004

8

Please find below and/or attached an Office communication concerning this application or proceeding.

SL

Office Action Summary

Application No.

09/481,388

Applicant(s)

DWORK, JEFFREY

Examiner

Niketa I. Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 15-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 15-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 February 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-13 and 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watkins U.S. Patent Number: 6,049,857 (hereinafter referred to as "Watkins") and further in view of Hansen U.S. Patent Number: 6,101,590 (hereinafter referred to as "Hansen".)

3. Referring to claims 1, 18, Watkins teaches a data processing system operable with at least two type of software, the system comprising: a host interface for providing address, data and control signals from a host [see figure 2A - elements 210i-j; column 6 - lines 36-48], a storage element for holding data accessible via the host interface [see figure 2A - element 220], and alternate access circuitry for providing access to the storage element [see column 5 - lines 10-16, 58-61; column 6 -

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lines 7-16; 'address translation unit'] however, fails to set forth the limitation of providing access to the storage element so as to access the data as a first data element in a first register when the system operates with a first type of software, and as a second data element in the second register when the system operates with a second type of software. *Hansen* teaches an alternate access circuitry for providing access to the storage element so as to access the data as a first data element in a first register when the system operates with a first type of software, and as a second data element in the second register when the system operates with a second type of software [see *Hansen* column 2 - lines 45-51, 'each of the tasks are different software'; column 4 - lines 45-57; column 5 - lines 30-54] resulting in a system which allows multiple programs to simultaneously share a computer system's main memory and increases the overall efficiency and flexibility of the system.

One of ordinary skill in the art at the time of applicant's invention would have clearly recognized that it is quite advantageous for the processing system of *Watkins* to allow multiple programs to simultaneously share a computer system's main memory. It is for this reason that one of ordinary skill in the art would have been motivated to substitute *Watkins's* alternate access circuitry with an access circuitry, which

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allows an access to a storage location based on the type of software that is running on the system, in order to allow multiple programs to simultaneously share a computer system's main memory and increases the overall efficiency and flexibility of the system.

4. **Referring to claim 2**, the system of *Watkins* as modified by the teachings of *Hansen*, as applied to claim 1 above, teaches that the alternate access circuitry is configured to perform writing data into the storage element in response to a first address signal supplied from the host interface to access the first register, when the system operates with the first type of software [see *Hansen* column 9 - lines 10-24.]

5. **Referring to claim 3**, the system of *Watkins* as modified by the teachings of *Hansen*, as applied to claim 1 above, teaches that the alternate access circuitry is configured to perform writing data into the storage element in response to a second address signal supplied from the host interface to access the second register, when the system operates with the second type of software [see *Hansen* column 9 - lines 10-24.]

6. **Referring to claim 4**, the system of *Watkins* as modified by the teachings of *Hansen*, as applied to claim 1 above, teaches that the alternate access circuitry is configured to perform reading data from the storage element in response to a first

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address signal supplied from the host interface to access the first register, when the system operates with the first type of software [see *Hansen* column 9 - lines 10-24.]

7. **Referring to claim 5**, the system of *Watkins* as modified by the teachings of *Hansen*, as applied to claim 1 above, teaches that the alternate access circuitry is configured to perform reading data from the storage element in response to a second address signal supplied from the host interface to access the second register, when the system operates with the second type of software [see *Hansen* column 9 - lines 10-24.]

8. **Referring to claims 6, 7, 8, 9, 10**, the system of *Watkins* as modified by the teachings of *Hansen*, as applied to claim 1 above, teaches an alternate access circuitry, however fails to set forth the limitation of the alternate access circuitry comprises a writing multiplexer having a first input for supplying the first data element to the storage element when the system operates with the first type of software, and a second input for supplying the second data element to the storage element when the system operates with the second type of software and a first and second select signals supplied from the host to control the multiplexer to access the first and second registers.

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It would have been obvious to one of ordinary skill in the art at the time of applicant's invention that it was old and well known in the computer art to use multiplexer as a switching element in order to implement switching of two or more signals using hardware components rather than software. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to implement switching of two signals using multiplexer in order to save software resources.

9. **Referring to claim 11**, the system of *Watkins* as modified by the teachings of *Hansen*, as applied to claim 1 above, teaches that the alternate access circuitry comprises a first reading gate coupled to the storage element for outputting the first data element when the system operates with the first type of software, and a second reading gate coupled to the storage element for outputting the second data element when the system operates with the second type of software [see *Hansen* column 4 - lines 45-57; column 9 - lines 10-24.]

10. **Referring to claim 12**, the system of *Watkins* as modified by the teachings of *Hansen*, as applied to claim 1 above, teaches that the first reading gate is configured to output the first data element in response to a first address signal supplied from the host interface to access the first register [see *Hansen* column 4 - lines 45-57; column 9 - lines 10-24.]

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11. **Referring to claim 13**, the system of *Watkins* as modified by the teachings of *Hansen*, as applied to claim 1 above, teaches that the second reading gate is configured to output the second data element in response to a second address signal supplied from the host interface to access the second register [see *Hansen* column 4 - lines 45-57; column 9 - lines 10-24.]

12. **Referring to claim 15**, *Watkins* teaches a network interface comprising: a host interface for supplying address, data and control signals from a host [see figure 2A - elements 210i-j; column 6 - lines 36-48], a storage element for holding a data element accessible via the host interface [see figure 2A - element 220], and alternate access circuitry coupled to the storage element for providing multiple paths for accessing the data element [see column 5 - lines 10-16, 58-61; column 6 - lines 7-16; 'address translation unit'] however, fails to set forth the limitation of configured to select a path for accessing the data element depending on a type of software used to operate the network interface. *Hansen* teaches alternate access circuitry for providing access to the storage element depending on a type of software used to operate the network interface [see *Hansen* column 2 - lines 45-51, 'each of the tasks are different software'; column 4 - lines 45-57; column 5 - lines 30-54] resulting in a system which allows multiple

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programs to simultaneously share a computer system's main memory and increases the overall efficiency and flexibility of the system.

One of ordinary skill in the art at the time of applicant's invention would have clearly recognized that it is quite advantageous for the processing system of *Watkins* to allow multiple programs to simultaneously share a computer system's main memory. It is for this reason that one of ordinary skill in the art would have been motivated to substitute *Watkins's* alternate access circuitry with an access circuitry, which allows an access to a storage location based on the type of software that is running on the system, in order to allow multiple programs to simultaneously share a computer system's main memory and increases the overall efficiency and flexibility of the system.

13. **Referring to claim 16**, the system of *Watkins* as modified by the teachings of *Hansen*, as applied to claim 15 above, teaches that the path for accessing the data element is allocated in response to an address signal supplied from the network interface to access a predetermined register, when a selected type of software is used to operate the network interface [see *Hansen* column 2 - lines 45-51, 'each of the tasks are different software'; column 4 - lines 45-57; column 5 - lines 30-54.]

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14. **Referring to claim 17**, the system of *Watkins* as modified by the teachings of *Hansen*, as applied to claim 15 above, teaches that the selected type of software requires the data element to be held in the predetermined register [see *Hansen* column 2 - lines 45-51, 'each of the tasks are different software'; column 4 - lines 45-57; column 5 - lines 30-54.]

15. **Referring to claim 19**, the system of *Watkins* as modified by the teachings of *Hansen*, as applied to claim 15 above, teaches that the first access path is allocated in response to a first address signal identifying a first register required by the first type of software to hold the data element [see *Hansen* column 2 - lines 45-51, 'each of the tasks are different software'; column 4 - lines 45-57; column 5 - lines 30-54.]

16. **Referring to claim 20**, the system of *Watkins* as modified by the teachings of *Hansen*, as applied to claim 15 above, teaches that the second access path is allocated in response to a second address signal identifying a second register required by the second type of software to hold the data element [see *Hansen* column 2 - lines 45-51, 'each of the tasks are different software'; column 4 - lines 45-57; column 5 - lines 30-54.]

Response to Arguments

17. Applicant's arguments filed on 03/02/2004 have been fully considered but they are not persuasive.

The applicant argues that *Hansen* does not teach an alternate access circuitry for providing access to the storage element so as to access the data as a first data element in a first register when the system operates with a first type of software, and as a second data element in a second register when the system operates with a second type of software.

The Examiner respectfully disagrees with this argument. *Hansen* teaches an alternate access circuitry for providing access to the storage element so as to access the data as a first data element in a first register when the system operates with a first type of software, and as a second data element in a second register when the system operates with a second type of software [see *Hansen* column 15 - lines 29-46, 'Data may be shared or maintained independently between each thread using the virtual memory system of the present invention since each thread has a distinct version of the local TLB so that they may use the same address to mean different things, or may use the different addresses to mean the same thing, or may use the same address to reference the same memory, depending on the setting of the local-to-global translators'.]

Conclusion

18. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Niketa I. Patel whose telephone number is (703) 305 4893. The examiner can normally be reached on M-F 8:00 A.M. to 5:00 P.M.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey A. Gaffin can be reached on (703) 308 3301. The fax phone number for the

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organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NP
05/12/2004


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